

CLAIMS

1. A surge protector device of the spark gap lightning arrestor kind, the device comprising:

- a first spark gap (E1);

5 • a first pre-trigger system (2) electrically connected to the first spark gap (E1) in such a manner as to enable an arc to be struck therein; and

10 • a control device (4) electrically connected to the first pre-trigger system (2) in such a manner as to activate it;

the protector device being characterized in that it includes at least one second spark gap (E2) connected in parallel with the first spark gap (E1), and electrically connected to a second pre-trigger system (3) connected in parallel with the first pre-trigger system (2), in such a manner that the control device (4) activates the first and second pre-trigger systems (2, 3) simultaneously so as to trigger the first and second spark gaps (E1, E2) simultaneously.

20 2. A device according to claim 1, characterized in that each pre-trigger system (2, 3) is formed by a trigger electrode (5, 6).

25 3. A device according to claim 1, characterized in that each pre-trigger system (2, 3) is formed by a system comprising a trigger electrode (5, 6) together with a secondary circuit (S1, S1') of a transformer (TX1).

30 4. A device according to claim 1, characterized in that each pre-trigger system (2, 3) is an electronic system comprising a trigger electrode (5, 6) together with a transformer (TX1, TX2).

35 5. A device according to claim 2, 3, or 4, characterized in that each trigger electrode (5, 6) is electrically connected

to the secondary circuit (S1, S1', S2) of an associated transformer (TX1, TX2).

5 6. A device according to claim 4 or claim 5, characterized in that the primary circuits (P1, P2) of the transformers (TX1, TX2) corresponding respectively to the first and second pre-trigger systems (2, 3) are connected in parallel.

10 7. A device according to any one of claims 4 to 6, characterized in that the primary circuits (P1, P2) of the transformers (TX1, TX2) are electrically connected to the output (s) of the control device (4).

15 8. A device according to any one of claims 3 to 7, characterized in that the primary circuit (P1, P2) of each transformer (TX1, TX2) is electrically connected to a capacitor (C1, C2) that is charged under the control of the control device (4).

20 9. A device according to claim 8, characterized in that it includes a third spark gap (E3) connected in parallel with the capacitor (C1, C2) in such a manner that when the voltage across the terminals of the capacitor (C1, C2) reaches the trigger threshold value for said third spark gap (E3), it
25 short-circuits the capacitor (C1, C2), which then discharges through the primary circuit (P1, P2) of the transformer (TX1, TX2).

30 10. A device according to claim 9, characterized in that it has first and second capacitors (C1, C2) connected in parallel with the third spark gap (E3), and each electrically connected to the primary circuit (P1, P2) of an associated transformer (TX1, TX2).

11. A device according to any one of claims 1 to 10, characterized in that the control device (4) is sensitive to voltage.

- 5 12. A device according to claim 11, characterized in that the control device is made up of fuses (7), varistors (8), and spark gaps (9).